Discussion of Piazzesi, Rogers, and Schneider, "Money and Banking in a New Keynesian Model"

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Conference on Macroeconomics and Monetary Policy

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Banking in the Paper

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Thus, the paper is really about "Money and ***Deposits*** in a New Keynesian Model"

Background: Money in the NK Model

In a standard NK Model with money,

$$u(C_t, N_t, M_t/P_t) \;=\; \frac{{C_t}^{1-1/\sigma}}{1-1/\sigma} \,-\, \psi\frac{{N_t}^{1+\phi}}{1+\phi} \,+\, \omega\frac{(M_t/P_t)^{1-1/\eta}}{1-1/\eta}$$

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- If the central bank controls M_t/P_t, then i_t is determined by this equation
- So money is ***separable*** from the rest of the model; just regard the central bank as controlling i_t directly

In This Paper

Consumption and Money are complements:

$$u(C_t, N_t, M_t/P_t) \;=\; \frac{\left(C_t{}^{1-1/\eta} + \omega(M_t/P_t)^{1-1/\eta}\right)^{\frac{1-1/\sigma}{1-1/\eta}}}{1-1/\sigma} \;-\; \psi\frac{N_t{}^{1+\phi}}{1+\phi}$$

In This Paper

Consumption and **Deposits** are complements:

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Note:

- Woodford's cashless limit: $\omega \to 0$

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and $\left(\dfrac{D_t/P_t}{C_t}\right)^{-1/\eta} \;=\; q_t/\omega$

Key Equation

Log-linearizing

$$\left(\frac{D_t/P_t}{C_t}\right)^{-1/\eta} = \frac{1}{\omega}\,\frac{i_t^S - i_t^D}{1 + i_t^S}$$

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- only ***partial pass-through*** from i_t^D to i_t^S

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$$i_t^S = i_t^D + \frac{i^S - i^D}{\eta}(\hat{y}_t + \hat{p}_t - \hat{d}_t) \qquad (*)$$

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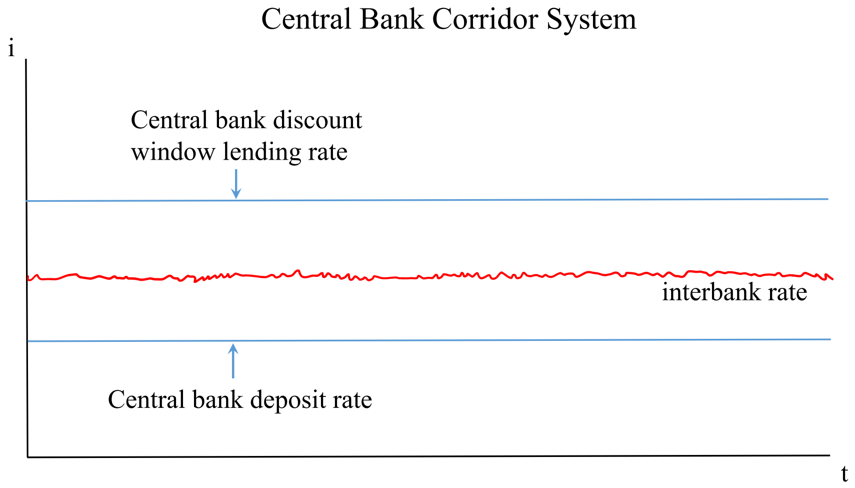
- so $\hat{d}_t$ and i_t^D are perfect substitutes, span each other

Central Bank Corridor vs. Floor System



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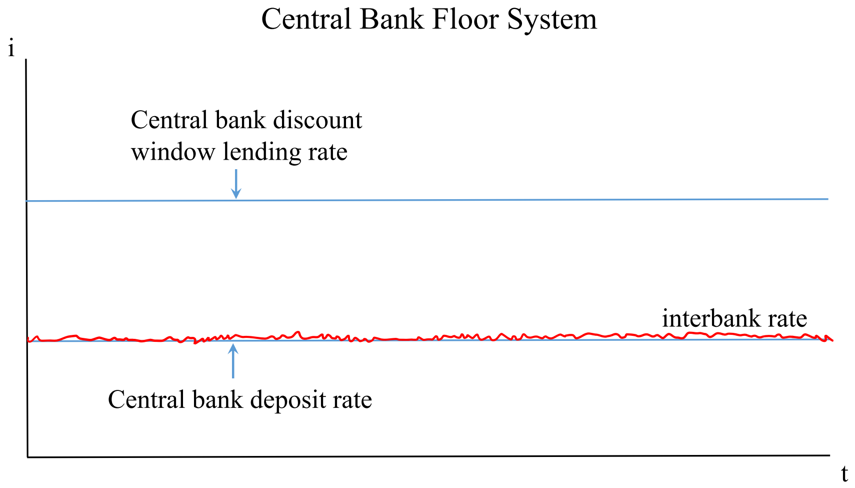

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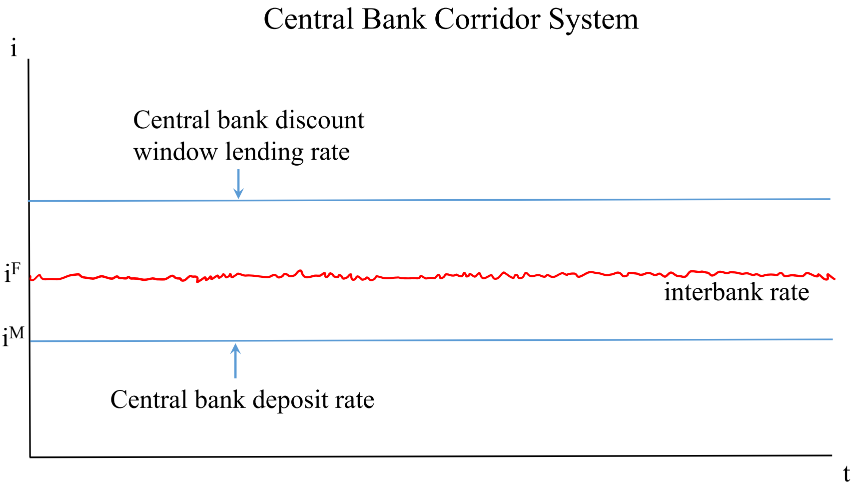
- changes in $i_t^M \Longrightarrow$ changes in i_t^D

Central Bank Corridor System Model



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- but is capturing only part (a small part?) of the story

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$\frac{1+i^S}{1+i^D} > 1$, so there could be ***amplification*** of changes in i^D on i^S

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- There is a natural path for $\hat{d}_t$ which replicates the standard NK equilibrium ***exactly***

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- Partial pass-through is not interesting if Monetary Policy Equivalence holds

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- Having $\omega \gg 0$ is crucial for results in the paper
- How important is D/P for household utility?

Summary of Comments

1. Elegant model of money and deposits in NK model
2. Model of Monetarist dimensions of financial crisis and Fed response
   - not of other dimensions
3. Are results robust to minor errors in the paper? (I think so.)
4. Less focus on partial pass-through of monetary policy rate when $\hat{d}_t$ is fixed
   - More focus on whether Monetary Policy Equivalence holds in model or not
5. Woodford cashless limit
   - motivate why $\omega \gg 0$